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ENTRY SESSION
FULL ESTIMATED COST 0.22 0.22

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 11:17:03 ON 12 OCT 2009

71 FILES IN THE FILE LIST IN STNINDEX

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=> S galactosyltransferase
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4 FILE ADISINSIGHT
1 FILE ADISNEWS
280 FILE AGRICOLA
31 FILE ANABSTR
1 FILE ANTE
19 FILE AQUASCI
200 FILE BIOENG
3465 FILE BIOSIS
371 FILE BIOTECHABS
371 FILE BIOTECHDS
1154 FILE BIOTECHNO
556 FILE CABA
4357 FILE CAPLUS
39 FILE CEABA-VTB
8 FILE CIN
113 FILE CONFSCI
3 FILE CROPU
56 FILE DDFB
71 FILE DDFU
2632 FILE DGENE
145 FILE DISSABS
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1133 FILE ESBIOBASE
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1 FILE PROUSDDR
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1676 FILE USPATFULL

356 FILE USPAT2
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3 FILE VETU
264 FILE WPIDS
264 FILE WPINDEX
1 FILE IPA
2 FILE NAPRALERT
23 FILE NLDB

55 FILES HAVE ONE OR MORE ANSWERS, 71 FILES SEARCHED IN STNINDEX

L1 QUE GALACTOSYLTRANSFERASE

=> d rank
F1 4357 CAPLUS
F2 3920 GENBANK
F3 3465 BIOSIS
F4 3371 USGENE
F5 3027 SCISEARCH
F6 2865 EMBASE
F7 2802 MEDLINE
F8 2632 DGENE
F9 1676 USPATFULL
F10 1173 TOXCENTER
F11 1154 BIOTECHNO
F12 1133 ESBIOBASE
F13 1133 PASCAL
F14 884 LIFESCI
F15 556 CABA
F16 462 IFIPAT
F17 371 BIOTECHABS
F18 371 BIOTECHDS
F19 356 USPAT2
F20 280 AGRICOLA
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F23 200 BIOENG
F24 145 DISSABS
F25 113 CONFSCI
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F27 71 DDFU
F28 56 DDFB
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F47 2 VETB
F48 2 NAPRALERT
F49 1 ADISNEWS
F50 1 ANTE
F51 1 IMSDRUGNEWS
F52 1 IMSRESEARCH
F53 1 OCEAN
F54 1 PROUSDDR
F55 1 IPA

=> file f1, f3, f5-f7, f9-f17, f20, f21
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 2.04 2.26

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=> S L1
L2 25231 L1

=> S (mutant or mutattion or modif? or substitution) (s) L2
L3 2181 (MUTANT OR MUTATTION OR MODIF? OR SUBSTITUTION) (S) L2

=> S (mutant or mutation or modif? or substitution) (s) L2
L4 2445 (MUTANT OR MUTATION OR MODIF? OR SUBSTITUTION) (S) L2

=> S metal (s) L4
L5 46 METAL (S) L4

=> S metal and L4
L6 287 METAL AND L4

=> S binding and L6
L7 269 BINDING AND L6

=> S ion and L7
L8 229 ION AND L7

=> S magnesium and L8
L9 117 MAGNESIUM AND L8

=> S (M344 or C342 or R228 or A229) and L9
L10 1 (M344 OR C342 OR R228 OR A229) AND L9

=> S binding and L5
L11 40 BINDING AND L5

=> S (M344 or C342 or R228 or A229) and L11
L12 1 (M344 OR C342 OR R228 OR A229) AND L11

=> S (M344 or C342 or R228 or A229) and L3
L13 1 (M344 OR C342 OR R228 OR A229) AND L3

=> dup rem L11
PROCESSING COMPLETED FOR L11
L14 35 DUP REM L11 (5 DUPLICATES REMOVED)

=> S (qasba or boeggeman or ramakrishnan)/au
L15 665 (QASBA OR BOEGGEMAN OR RAMAKRISHNAN)/AU

=> L15 and L14
L15 IS NOT A RECOGNIZED COMMAND
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For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> S L15 and L14
L16 0 L15 AND L14

=> S L15 and L4
L17 4 L15 AND L4

=> dup rem L17
PROCESSING COMPLETED FOR L17
L18 4 DUP REM L17 (0 DUPLICATES REMOVED)

=> d ibib abs L14 1-35

L14 ANSWER 1 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2009:266909 USPATFULL <<LOGINID::20091012>>
TITLE: Compositions and Methods for Modifying Cell Surface Glycans
INVENTOR(S): Sackstein, Robert, Sudbury, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20090239296	A1	20090924
APPLICATION INFO.:	US 2009-423478	A1	20090414 (12)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2007-810256, filed on 4 Jun 2007, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2006-810469P	20060602 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C, ONE FINANCIAL CENTER, BOSTON, MA, 02111, US
NUMBER OF CLAIMS: 2
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)

LINE COUNT: 939
AB Methods and compositions for modifying glycans (e.g., glycans expressed on the surface of live cells or cell particles) are provided herein.

L14 ANSWER 2 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2009:207158 USPATFULL <<LOGINID::20091012>>
TITLE: Transgenic Ungulates Expressing CTLA4-IG and Uses Thereof
INVENTOR(S): Ayares, David Lee, Blacksburg, VA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20090186097	A1	20090723
APPLICATION INFO.:	US 2006-990246	A1	20060809 (11)
	WO 2006-US30842		20060809
			20090226 PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	US 2005-706843P	20050809 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: King & Spalding, 1180 Peachtree Street, N.E., 34th Floor, Atlanta, GA, 30309-3521, US
NUMBER OF CLAIMS: 69
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Page(s)
LINE COUNT: 2901
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides ungulates, including pigs, expressing CTLA4-Ig, as well as tissue, organs, cells and cell lines derived from such animals. Such animals, tissues, organs and cells can be used in research and medical therapy, including xenotransplanation. In addition, methods are provided to prepare organs, tissues and cells expressing the CTLA4-Ig for use in xenotransplantation, and nucleic acid constructs and vectors useful therein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 3 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2009:197758 USPATFULL <<LOGINID::20091012>>
TITLE: METHOD FOR DIRECTING NUCLEIC ACIDS TO PLASTIDS
INVENTOR(S): Arar, Chantal, Draveil, FRANCE
De Rose, Richard, Raleigh, NC, UNITED STATES
Duprat, Anne, Noisy Le Sec, FRANCE
Joyard, Jacques, Meylan, FRANCE
Nicolai, Maryse, Brignoles, FRANCE
Robaglia, Christophe, Venelles, FRANCE
Rolland, Norbert, Saint-Egreve, FRANCE
Salvi, Daniel, Tullins, FRANCE
Sormani, Rodnay, Aix En Provence, FRANCE

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20090178161	A1	20090709
APPLICATION INFO.:	US 2005-720133	A1	20051125 (11)
	WO 2005-FR2940		20051125
			20080303 PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	FR 2004-12601	20041126

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: STITES & HARBISON PLLC, 1199 NORTH FAIRFAX STREET, SUITE 900, ALEXANDRIA, VA, 22314, US
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1
LINE COUNT: 8304

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to nucleic acid sequences naturally imported into a plant cell plastid, and use thereof for directing an RNA sequence of interest to a plastid, which permits, in particular, the directed expression of a protein of interest in a plant cell plastid.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 4 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2009:67174 USPATFULL <<LOGINID::20091012>>
TITLE: GLYCAN-OPTIMIZED ANTI-CD20 ANTIBODIES
INVENTOR(S): Dickey, Lynn F., Cary, NC, UNITED STATES
Cox, Kevin M., Raleigh, NC, UNITED STATES
Peele, Charles G., Apex, NC, UNITED STATES
Wang, Ming-Bo, Kaleen, AUSTRALIA
PATENT ASSIGNEE(S): Biolex Therapeutics, Inc., Pittsboro, NC, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20090060921	A1	20090305
APPLICATION INFO.:	US 2008-115133	A1	20080505 (12)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2007-624164, filed on 17 Jan 2007, PENDING Continuation-in-part of Ser. No. US 2007-624158, filed on 17 Jan 2007, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2006-860358P	20061121 (60)
	US 2006-836998P	20060811 (60)
	US 2006-812702P	20060609 (60)
	US 2006-791178P	20060411 (60)
	US 2006-790373P	20060407 (60)
	US 2006-759298P	20060117 (60)
	US 2007-12135P	20071207 (61)
	US 2007-979698P	20071012 (60)
	US 2007-916125P	20070504 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ALSTON & BIRD LLP, BANK OF AMERICA PLAZA, 101 SOUTH TRYON STREET, SUITE 4000, CHARLOTTE, NC, 28280-4000, US
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 69 Drawing Page(s)
LINE COUNT: 7456
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Glycan-optimized monoclonal antibodies that specifically bind CD20 antigen and which have improved effector function are provided. The anti-CD20 antibodies of the invention have a glycosylation pattern that results in an antibody composition having predominately the G0 glycoform, and thus comprise N-glycans that lack fucose (i.e., afucosylated) and galactose residues attached thereto. In some embodiments, these anti-CD20 antibodies comprise the light chain and heavy chain sequences of the rituximab anti-CD20 antibody, and thus represent afucosylated rituximab. Methods for producing these glycan-optimized anti-CD20 antibodies are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 5 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2008:312806 USPATFULL <<LOGINID::20091012>>
TITLE: Methods and Compositions for Modifying Gene Regulation and Dna Damage in Ageing
INVENTOR(S): Yankner, Bruce, Newton, MA, UNITED STATES
Lu, Tao, Brookline, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20080274456	A1	20081106
APPLICATION INFO.:	US 2005-629223	A1	20050609 (11)

WO 2005-US20159 20050609
20080716 PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: US 2004-582329P 20040609 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: NUTTER MCCLENNEN & FISH LLP, WORLD TRADE CENTER WEST, 155 SEAPORT BOULEVARD, BOSTON, MA, 02210-2604, US
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Page(s)
LINE COUNT: 3090
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to gene regulation in ageing, and age-related cognitive decline. The invention, in particular relates to methods for screening a subject for a propensity to develop diseases associated with oxidative stress, and for age-related conditions, by examining the up-regulation and/or down-regulation of at least one gene associated within the central nervous system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 6 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2008:227766 USPATFULL <<LOGINID::20091012>>
TITLE: Catalytic Domains Of Beta(1,4)-Galactosyltransferase I Having Altered Metal Ion Specificity
INVENTOR(S): Qasba, Pradman, Bethesda, MD, UNITED STATES
Boeggeman, Elizabeth, Bethesda, MD, UNITED STATES
Ramakrishnan, Boopathy, Frederick, MD, UNITED STATES
PATENT ASSIGNEE(S): Goverment of the US, as represented by the Secretary, Department of Health and Human Services, Rockville, MD, UNITED STATES (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 20080199905 A1 20080821
APPLICATION INFO.: US 2004-581942 A1 20041206 (10)
WO 2004-US40844 20041206
20070423 PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: US 2003-527615P 20031205 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: EDWARDS ANGELL PALMER & DODGE LLP, (CLIENT REFERENCE NO. 47992), PO BOX 55874, BOSTON, MA, 02205, US
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Page(s)
LINE COUNT: 2840
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are mutants of galactosyltransferases that can catalyze formation of oligosaccharides in the presence of magnesium; mutants of galactosyltransferases having altered donor and acceptor specificity which can catalyze formation of oligosaccharides in the presence of magnesium; methods and compositions that can be used to synthesize oligosaccharides; methods for increasing the immunogenicity of an antigen; and methods to stabilize platelets.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 7 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2008:75162 USPATFULL <<LOGINID::20091012>>
TITLE: COMPOSITIONS AND METHODS FOR HUMANIZATION AND OPTIMIZATION OF N-GLYCANS IN PLANTS
INVENTOR(S): Dickey, Lynn F., Cary, NC, UNITED STATES
Cox, Kevin M., Raleigh, NC, UNITED STATES

Peele, Charles G., Apex, NC, UNITED STATES
PATENT ASSIGNEE(S): Biolex, Inc., Pittsboro, NC, UNITED STATES, 27312 (U.S. corporation)

NUMBER	KIND	DATE
PATENT INFORMATION: US 20080066200	A1	20080313
APPLICATION INFO.: US 2007-624164	A1	20070117 (11)

NUMBER	DATE
PRIORITY INFORMATION: US 2006-759298P	20060117 (60)
US 2006-790373P	20060407 (60)
US 2006-791178P	20060411 (60)
US 2006-812702P	20060609 (60)
US 2006-836998P	20060811 (60)
US 2006-860358P	20061121 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ALSTON & BIRD LLP, BANK OF AMERICA PLAZA, 101 SOUTH TRYON STREET, SUITE 4000, CHARLOTTE, NC, 28280-4000, US
NUMBER OF CLAIMS: 129
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 59 Drawing Page(s)
LINE COUNT: 7588
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for altering the N-glycosylation pattern of proteins in higher plants are provided. The methods comprise introducing into the plant a recombinant construct that provides for the inhibition of expression of .alpha.1,3-fucosyltransferase (FucT) and .beta.1,2-xylosyltransferase (XylT) in a plant. Use of these constructs to inhibit or suppress expression of both of these enzymes, and isoforms thereof, advantageously provides for the production of endogenous and heterologous proteins having a "humanized" N-glycosylation pattern without impacting plant growth and development. Stably transformed higher plants having this protein N-glycosylation pattern are provided. Glycoprotein compositions, including monoclonal antibody compositions, having substantially homogeneous glycosylation profiles, and which are substantially homogeneous for the G0 glycoform, are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 8 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2008:68169 USPATFULL <<LOGINID::20091012>>
TITLE: COMPOSITIONS AND METHODS FOR HUMANIZATION AND OPTIMIZATION OF N-GLYCANS IN PLANTS
INVENTOR(S): Dickey, Lynn F., Cary, NC, UNITED STATES
Cox, Kevin M., Raleigh, NC, UNITED STATES
Peele, Charles G., Apex, NC, UNITED STATES
Wang, Ming-Bo, Kaleen, AUSTRALIA
PATENT ASSIGNEE(S): Biolex, Inc., Pittsboro, NC, UNITED STATES (U.S. corporation)

NUMBER	KIND	DATE
PATENT INFORMATION: US 20080060092	A1	20080306
APPLICATION INFO.: US 2007-624158	A1	20070117 (11)

NUMBER	DATE
PRIORITY INFORMATION: US 2006-759298P	20060117 (60)
US 2006-790373P	20060407 (60)
US 2006-791178P	20060411 (60)
US 2006-812702P	20060609 (60)
US 2006-836998P	20060811 (60)
US 2006-860358P	20061121 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ALSTON & BIRD LLP, BANK OF AMERICA PLAZA, 101 SOUTH TRYON STREET, SUITE 4000, CHARLOTTE, NC, 28280-4000, US

NUMBER OF CLAIMS: 161
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 59 Drawing Page(s)
LINE COUNT: 7824
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for altering the N-glycosylation pattern of proteins in higher plants are provided. The methods comprise introducing into the plant a recombinant construct that provides for the inhibition of expression of .alpha.1,3-fucosyltransferase (FucT) and .beta.1,2-xylosyltransferase (XylT) in a plant. Use of these constructs to inhibit or suppress expression of both of these enzymes, and isoforms thereof, advantageously provides for the production of endogenous and heterologous proteins having a "humanized" N-glycosylation pattern without impacting plant growth and development. Stably transformed higher plants having this protein N-glycosylation pattern are provided. Glycoprotein compositions, including monoclonal antibody compositions, having substantially homogeneous glycosylation profiles, and which are substantially homogeneous for the G0 glycoform, are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 9 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2008:50632 USPATFULL <<LOGINID::20091012>>
TITLE: Compositions and methods for modifying cell surface glycans
INVENTOR(S): Sackstein, Robert, Sudbury, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20080044383	A1	20080221
APPLICATION INFO.:	US 2007-810256	A1	20070604 (11)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2006-810469P	20060602 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MINTZ, LEVIN, COHN, FERRIS, GLOVSKY, AND POPEO, P.C., ONE FINANCIAL CENTER, BOSTON, MA, 02111, US
NUMBER OF CLAIMS: 47
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Page(s)
LINE COUNT: 1067
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods and compositions for modifying glycans (e.g., glycans expressed on the surface of live cells or cell particles) are provided herein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 10 OF 35 WPIDS COPYRIGHT 2009 THOMSON REUTERS on STN
ACCESSION NUMBER: 2009-A72072 [03] WPIDS
CROSS REFERENCE: 2005-434382
TITLE: New uridine 5'-diphospho-2-deoxy-alpha-D-galactopyranose derivatives useful as labeling agents for detecting O-N-acetyl glycosylated post-translational modifications on proteins; for detection of e.g. cancer and Alzheimer's disease
DERWENT CLASS: B03; B04
INVENTOR: ARNDT S; HSEIH-WILSON L; KHIDEKEL N; TAI H
PATENT ASSIGNEE: (ITRO-C) INVITROGEN CORP
COUNTRY COUNT: 1

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20080312424	A1	20081218	(200903)*	EN	72	[25]

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20080312424 A1	Provisional	US 2003-523523P	20031118
US 20080312424 A1	Div Ex	US 2004-990767	20041117
US 20080312424 A1		US 2007-763834	20070615

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 20080312424 A1	Div ex	US 7332355 B

PRIORITY APPLN. INFO: US 2007-763834 20070615
US 2003-523523P 20031118
US 2004-990767 20041117

AN 2009-A72072 [03] WPIDS

CR 2005-434382

AB US 20080312424 A1 UPAB: 20090527

NOVELTY - Uridine 5'-diphospho-2-deoxy- alpha -D-galactopyranose derivatives are new.

DETAILED DESCRIPTION - Uridine 5'-diphospho-2-deoxy- alpha -D-galactopyranose derivative of formula (I), is new.

R=a substituent selected from straight chain or branched 1-12C carbon chain (containing a carbonyl, azide, alkyne, or alkene group), or azide group.

An INDEPENDENT CLAIM is included for a labeled protein obtained by contacting a post-translationally modified protein comprising a pendant moiety with a labeling agent comprising a chemical handle, and capable of reacting with the pendant moiety in the presence of an enzyme; and reacting the chemical handle with a detection agent.

USE - As a labeling agent for detecting O-N-acetyl glycosylated (O-GlcNAc) post-translational modifications on proteins; for detection of e.g. cancer, Alzheimer's disease, neurodegeneration, cardiovascular disease, and diabetes.

ADVANTAGE - The uridine 5'-diphospho-2-deoxy- alpha -D-galactopyranose derivatives provide rapid and chemosensitive detection of post-translationally modified proteins, i.e. proteins with post-translational glycosylations; which are undetectable by prior art techniques due to the lability of the glycosidic linkage upon collision-induced dissociation (CID) and the preference of O-GlcNAc transferase (OGT) for sequences rich in serine, threonine and proline residues. The compound provides labeling by allowing selective transfer the unnatural ketone handle functionality onto the O-GlcNAc glycosylated proteins, by the engineered mutant of beta -1,4-galactosyltransferase (GalT). Once transferred, the ketone moiety serves as a versatile handle or unique marker to tag the O-GlcNAc glycosylated proteins for the attachment of biotin, and enables detection of the modified protein. This permits the rapid visualization of proteins that are at the limits of detection using traditional methods; and further can be used for detection of certain disease states such as cancer, Alzheimer's disease, neurodegeneration, cardiovascular disease, and diabetes. The label provides both a straightforward method to enrich low abundance O-GlcNAc peptides from complex mixtures, and a unique signature upon tandem mass spectroscopy (MS) for unambiguous identification of the O-GlcNAc glycosylated species; in contrast to the reported antibody or lectin-based methods; provides direct evidence of O-GlcNAc glycosylation; and permits mapping of modification sites to short amino acid sequences. The label also exhibits a potential to explore the interplay among post-translational modifications (PTMs), by a non-destructive technique that does not require the removal of other PTMs in order to study O-GlcNAc; and permits a direct examination of whether specific glycosylation and phosphorylation events are mutually exclusive in vivo, or whether the two modifications co-exist. The use of label can also be combined with existing beta -elimination strategies to identify specific sites of glycosylation. As mapping of sites by MS is challenging due to the lability of the sugar moiety and the preponderance of serine, threonine and proline residues in O-GlcNAc peptides; the combination of beta -elimination methods with the label, can localize the glycosylation site from various residues; and thus can be used as a powerful tool for mapping O-GlcNAc glycosylation sites on other proteins in vivo. The label

could identify 25 O-GlcNAc glycosylated proteins from the mammalian brain, which represents a significant expansion in the number of known O-GlcNAc proteins, and hence provides new insights into the breadth of the modification and its potential functions in the brain.

L14 ANSWER 11 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2007:315703 USPATFULL <<LOGINID::20091012>>
TITLE: Methods and Compositions for the Enzymatic Synthesis of Gangliosides
INVENTOR(S): Defrees, Shawn A., North Wales, PA, UNITED STATES
Johnson, Karl Frank, Hatboro, PA, UNITED STATES
Wang, Zhi-Guang, Dresher, PA, UNITED STATES
PATENT ASSIGNEE(S): Neose Technologies, Inc., Horsham, PA, UNITED STATES, 19044 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20070275908	A1	20071129
APPLICATION INFO.:	US 2004-547566	A1	20040304 (10)
	WO 2004-US6904		20040304
			20070615 PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-452796P	20030306 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 37 Drawing Page(s)
LINE COUNT: 3116
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Novel synthetic glycosphingolipids and pharmaceutical compositions containing such synthetic glycosphingolipids are described. Methods of making the novel synthetic glycosphingolipid compounds and compositions as well as their use in the field of neuroprotection and cancer treatment is also described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 12 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2007:177114 USPATFULL <<LOGINID::20091012>>
TITLE: Genes associate with progression and response in chronic myeloid leukemia and uses thereof
INVENTOR(S): Radich, Jerald P., Sammamish, WA, UNITED STATES
Dai, Hongyue, Kenmore, WA, UNITED STATES
Mao, Mao, Kirkland, WA, UNITED STATES
Schelter, Janell M., Bellevue, WA, UNITED STATES
Linsley, Peter S., Seattle, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20070154931	A1	20070705
APPLICATION INFO.:	US 2006-640517	A1	20061214 (11)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2005-751455P	20051215 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: JONES DAY, 222 EAST 41ST ST, NEW YORK, NY, 10017, US
NUMBER OF CLAIMS: 28
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Page(s)
LINE COUNT: 29037
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides molecular markers that are associated with the progression of chronic myeloid leukemia (CML), and methods and computer

systems for monitoring the progression of CML in a patient based on measurements of these molecular markers. The present invention also provides CML target genes, and methods and compositions for treating CML patients by modulating the expression or activity of these CML target genes and/or their encoded proteins. The invention also provides genes that are associated with resistance to imatinib mesylate (Gleevec.TM.) treatment in CML patients, and methods and compositions for determining the responsiveness of a CML patient to imatinib mesylate treatment based on measurements of these genes and/or their encoded proteins. The invention also provides methods and compositions for enhancing the effect of Gleevec.TM. by modulating the expression or activity of these genes and/or their encoded proteins.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 13 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2007:170046 USPATFULL <<LOGINID::20091012>>
TITLE: Synthesis of oligosaccharides, glycolipds, and glycoproteins using bacterial glycosyltransferases
INVENTOR(S): Johnson, Karl F., Hatboro, PA, UNITED STATES
Bezila, Daniel James, Philadelphia, PA, UNITED STATES
Taylor, Diane E., Edmonton, CANADA
Simala-Grant, Joanne, Edmonton, CANADA
Rasko, David, Arlington, VA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20070148728	A1	20070628
	US 7524655	B2	20090428
APPLICATION INFO.:	US 2003-521138	A1	20030723 (10)
	WO 2003-US23155		20030723
			20051206 PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-398156P	20020723 (60)
	US 2002-424894P	20021108 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS: 44
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 22 Drawing Page(s)
LINE COUNT: 3824
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides nucleic acid and amino acid sequences of fucosyltransferases from Helicobactor pylori. The invention also provides methods to use the fucosyltransferases to synthesize oligosaccharides, glycoproteins, and glycolipids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 14 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2007:120903 USPATFULL <<LOGINID::20091012>>
TITLE: Surrogate cell gene expression signatures for evaluating the physical state of a subject
INVENTOR(S): Clelland, Catherine, New York, NY, UNITED STATES
Bancroft, F. Carter, Huntington, NY, UNITED STATES
Clelland, James, New York, NY, UNITED STATES
PATENT ASSIGNEE(S): Mount Sinai School of Medicine of New York University, New York, NY, UNITED STATES, 10029 (U.S. corporation)
Research Foundation for Mental Hygiene, Menands, NY, UNITED STATES, 12204 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20070105105	A1	20070510
APPLICATION INFO.:	US 2004-558277	A1	20040524 (10)
	WO 2004-US16365		20040524

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-473089P	20030523 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DARBY & DARBY P.C., P. O. BOX 5257, NEW YORK, NY, 10150-5257, US
NUMBER OF CLAIMS: 104
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Page(s)
LINE COUNT: 15505
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to non-invasive and minimally invasive techniques for evaluating the physical state of a subject, including diagnosing a disease, disorder, or physical state of the subject, determining the prognosis of the subject, determining a subject's susceptibility for a disease, disorder, or physical state and determining, developing and monitoring treatment for the same. The invention also relates to identifying genetic alterations contributing to, or susceptibility for, development of a disease, disorder, or physical state, and for diagnosis, prognosis and treatment of the disease, disorder, or physical state.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 15 OF 35 Elsevier Biobase COPYRIGHT 2009 Elsevier Science B.V. on STN DUPLICATE 1
ACCESSION NUMBER: 2007213546 ESBIOBASE <<LOGINID::20091012>>
TITLE: Structural effects of naturally occurring human blood group B galactosyltransferase mutations adjacent to the DXD motif
AUTHOR(S): Persson, Mattias; Palcic, Monica M.; Letts, James A.; Borisova, Svetlana N.; Evans, Stephen V.; Hosseini-Maaf, Bahram; Olsson, Martin L.
CORPORATE SOURCE: Persson, Mattias; Palcic, Monica M. (Carlsberg Laboratory, Gamle Carlsberg Vej 10, 2500 Valby, Copenhagen (DK)); Letts, James A.; Borisova, Svetlana N.; Evans, Stephen V. (Department of Biochemistry and Microbiology, University of Victoria, Victoria, BC V8W 3P6 (CA)); Hosseini-Maaf, Bahram; Olsson, Martin L. (Department of Laboratory Medicine, Lund University, Lund University Hospital, SE-22185 Lund (SE)) EMAIL: monica@crc.dk; Martin_L.Olsson@med.lu.se
SOURCE: Journal of Biological Chemistry (30 Mar 2007) Volume 282, Number 13, pp. 9564-9570, 38 refs.
CODEN: JBCHA3 ISSN: 0021-9258 E-ISSN: 1083-351X
DOI: 10.1074/jbc.M610998200
COUNTRY OF PUBLICATION: United States of America
DOCUMENT TYPE: Journal; Article
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 3 Feb 2009
Last updated on STN: 3 Feb 2009
AN 2007213546 ESBIOBASE <<LOGINID::20091012>>
AB Human blood group A and B antigens are produced by two closely related glycosyltransferase enzymes. An N-acetylgalactosaminyltransferase (GTA) utilizes UDP-GalNAc to extend H antigen acceptors (Fuc.alpha.(1-2)Gal.beta.-OR) producing A antigens, whereas a ***galactosyltransferase*** (GTB) utilizes UDP-Gal as a donor to extend H structures producing B antigens. GTA and GTB have a characteristic 211 DVD 213 motif that coordinates to a Mn 2+ ion shown to be critical in donor ***binding*** and catalysis. Three GTB mutants, M214V, M214T, and M214R, with alterations adjacent to the 211 DVD 213 motif have been identified in blood banking laboratories. From serological phenotyping, individuals with the M214R ***mutation*** show the B el variant expressing very low levels of B antigens, whereas those with M214T and M214V mutations give rise to A weak B phenotypes. Kinetic analysis of recombinant ***mutant*** GTB enzymes revealed

that M214R has a 1200-fold decrease in k cat compared with wild type GTB. The crystal structure of M214R showed that DVD motif coordination to Mn 2+ was disrupted by Arg-214 causing displacement of the ***metal*** by a water molecule. Kinetic characterizations of the M214T and M214V mutants revealed they both had GTA and GTB activity consistent with the serology. The crystal structure of the M214T ***mutant*** showed no change in DVD coordination to Mn 2+ . Instead a critical residue, Met-266, which is responsible for determining donor specificity, had adopted alternate conformations. The conformation with the highest occupancy opens up the active site to accommodate the larger A-specific donor, UDP-GalNAc, accounting for the dual specificity. .COPYRGT. 2007 by The American Society for Biochemistry and Molecular Biology, Inc.

L14 ANSWER 16 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2006:86541 USPATFULL <<LOGINID::20091012>>
TITLE: Recombinant glycosyltransferase fusion proteins
INVENTOR(S): Bayer, Robert J, San Diego, CA, UNITED STATES
Mendoza, Grace, San Diego, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20060073542	A1	20060406
	US 7569376	B2	20090804
APPLICATION INFO.:	US 2003-513269	A1	20030505 (10)
	WO 2003-US14235		20030505
			20050728 PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-377730P	20020503 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 3807
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides recombinant glycosyltransferase fusion proteins having a desired level of expression and enzymatic activity (for example, acceptor substrate specificity or catalytic activity). The fusion proteins of the invention have a functional domain of a first glycosyltransferase joined, directly or through a peptide linker, to a subsequence of a functional domain of a second glycosyltransferase. Nucleic acids that encode the fusion proteins are also provided, as are host cells for expressing the fusion proteins and methods of making and using the fusion proteins of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 17 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2006:34176 USPATFULL <<LOGINID::20091012>>
TITLE: Novel full length cDNA
INVENTOR(S): Isogai, Takao, Ibaraki, JAPAN
Sugiyama, Tomoyasu, Tokyo, JAPAN
Otsuki, Tetsuji, Kisarazu-shi, JAPAN
Wakamatsu, Ai, Kisarazu-shi, JAPAN
Sato, Hiroyuki, Toyonaka-shi, JAPAN
Ishii, Shizuko, Kisarazu-shi, JAPAN
Yamamoto, Jun-ichi, Kisarazu-shi, JAPAN
Isono, Yuuko, Kisarazu-shi, JAPAN
Hio, Yuri, Kisarazu-shi, JAPAN
Otsuka, Kaoru, Honjo-shi, JAPAN
Nagai, Keiichi, Tokyo, JAPAN
Irie, Ryotaro, Kisarazu-shi, JAPAN
Tamechika, Ichiro, Hirakata-shi, JAPAN
Seki, Naohiko, Chiba-shi, JAPAN
Yoshikawa, Tsutomu, Kisarazu-shi, JAPAN

Otsuka, Motoyuki, Tokyo, JAPAN
Nagahari, Kenji, Tokyo, JAPAN
Masuho, Yasuhiko, Tokyo, JAPAN
PATENT ASSIGNEE(S): RESEARCH ASSOCIATION FOR BIOTECHNOLOGY (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20060029945	A1	20060209
APPLICATION INFO.:	US 2005-72512	A1	20050307 (11)

RELATED APPLN. INFO.: Division of Ser. No. US 2002-104047, filed on 25 Mar 2002, GRANTED, Pat. No. US 6943241

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2001-379298	20011105
	US 2002-350978P	20020125 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: FOLEY AND LARDNER LLP, SUITE 500, 3000 K STREET NW, WASHINGTON, DC, 20007, US
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 1 Drawing Page(s)
LINE COUNT: 12974
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Novel full-length cDNAs are provided. 1970 cDNA derived from human have been isolated. The full-length nucleotide sequences of the cDNA and amino acid sequences encoded by the nucleotide sequences have been determined. Because the cDNA of the present invention are full-length and contain the translation start site, they provide information useful for analyzing the functions of the polypeptide.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 18 OF 35 Elsevier Biobase COPYRIGHT 2009 Elsevier Science B.V. on STN
ACCESSION NUMBER: 2006080135 ESBIOBASE <<LOGINID::20091012>>
TITLE: Structural snapshots of .beta.-1,4-galactosyltransferase-1 along the kinetic pathway
AUTHOR(S): Ramakrishnan, Boopathy; Ramasamy, Velavan; Qasba, Pradman K.
CORPORATE SOURCE: Ramakrishnan, Boopathy; Ramasamy, Velavan; Qasba, Pradman K. (Structural Glycobiology Section, Nanobiology Program Center for Cancer Research, NCI-Frederick, Frederick, MD 21702 (US)); Ramakrishnan, Boopathy (Structural Glycobiology Section, Nanobiology Program SAIC-Frederick, Inc., Center for Cancer Research, Frederick, MD 21702 (US))
EMAIL: qasba@helix.nih.gov
SOURCE: Journal of Molecular Biology (14 Apr 2006) Volume 357, Number 5, pp. 1619-1633, 36 refs.
CODEN: JMOBAK ISSN: 0022-2836
DOI: 10.1016/j.jmb.2006.01.088
PUBL. ITEM IDENTIFIER: S0022283606001410
COUNTRY OF PUBLICATION: United Kingdom
DOCUMENT TYPE: Journal; Article
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 3 Feb 2009
Last updated on STN: 3 Feb 2009
AN 2006080135 ESBIOBASE <<LOGINID::20091012>>
AB During the catalytic cycle of .beta.1,4- ***galactosyltransferase*** -1 (Gal-T1), upon the ***binding*** of Mn 2+ followed by UDP-Gal, two flexible loops, a long and a short loop, change their conformation from open to closed. We have determined the crystal structures of a human M340H-Gal-T1 ***mutant*** in the open conformation (apo-enzyme), its Mn 2+ and Mn 2+ -UDP-Gal-bound complexes, and of a pentenary complex of bovine Gal-T1-Mn 2+ -UDP-

GalNAc-Glc-.alpha.-lactalbumin. These studies show that during the conformational changes in Gal-T1, the coordination of Mn 2+ undergoes significant changes. It loses a coordination bond with a water molecule bound in the open conformation of Gal-T1 while forming a new coordination bond with another water molecule in the closed conformation, creating an active ground-state structure that facilitates enzyme catalysis. In the crystal structure of the pentenary complex, the N-acetylglucosamine (GlcNAc) moiety is found cleaved from UDP-GalNAc and is placed 2.7 A away from the O4 oxygen atom of the acceptor Glc molecule, yet to form the product. The anomeric C1 atom of the cleaved GalNAc moiety has only two covalent bonds with its non-hydrogen atoms (O5 and C2 atoms), similar to either an oxocarbenium ion or N-acetylgalactal form, which are crystallographically indistinguishable at the present resolution. The structure also shows that the newly formed, ***metal*** -coordinating water molecule forms a hydrogen bond with the .beta.-phosphate group of the cleaved UDP moiety. This hydrogen bond formation results in the rotation of the .beta.-phosphate group of UDP away from the cleaved GalNAc moiety, thereby preventing the re-formation of the UDP-sugar during catalysis. Therefore, this water molecule plays an important role during catalysis in ensuring that the catalytic reaction proceeds in a forward direction.

L14 ANSWER 19 OF 35 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:540654 CAPLUS <<LOGINID::20091012>>
DOCUMENT NUMBER: 143:73866
TITLE: Construction of .beta.(1,4)-***galactosyltransferase*** I ***mutant*** catalytic domains having altered ***metal*** ion specificity and use in preparation of oligosaccharides and antigens
INVENTOR(S): Qasba, Pradman; Boeggeman, Elizabeth; Ramakrishnan, Boopathy
PATENT ASSIGNEE(S): Government of the United States of America as Represented by the Secretaryof the Department of Health and Human Services, USA
SOURCE: PCT Int. Appl., 103 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005056783	A1	20050623	WO 2004-US40844	20041206
US 20080199905	A1	20080821	US 2007-581942	20070423

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-527615P P 20031205
WO 2004-US40844 W 20041206

AB Disclosed are mutants of galactosyltransferases that can catalyze formation of oligosaccharides in the presence of magnesium; mutants of galactosyltransferases having altered donor and acceptor specificity which can catalyze formation of oligosaccharides in the presence of magnesium; methods and compns. that can be used to synthesize oligosaccharides; methods for increasing the immunogenicity of an antigen (i.e., vaccine); and methods to stabilize platelets. More specifically, the invention provides altered bovine .beta.(1,4)-galactosyltransferase I catalytic domains that transfer galactose from a donor, UDP-galactose, to an acceptor, N-acetylglucosamine, to form a galactose-.beta.(1,4)-N-acetylglucosamine bond in the presence of wide

range of metal ions, including magnesium and zinc. This broad metal utilization contrasts with that of the corresponding wild-type enzyme that utilizes manganese. The invention also provides polypeptides that contain each of the catalytic domains. The invention provides nucleic acid segments that encode the .beta.-(1,4)-galactosyltransferase I catalytic domains. Expression cassettes and cells that include nucleic acid segments that encode the .beta.(1,4)-galactosyltransferase I catalytic domains are also provided.
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 20 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2005:281780 USPATFULL <<LOGINID::20091012>>
TITLE: Neutral glycosphingolipids and glycosyl-sphingosines and methods for isolating the same
INVENTOR(S): DeFrees, Shawn, North Wales, PA, UNITED STATES
PATENT ASSIGNEE(S): Shawn DeFrees (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20050245735	A1	20051103
APPLICATION INFO.:	US 2003-485195	A1	20020801 (10)
	WO 2002-US24667		20020801
			20040816 PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-309315P	20010801 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MORGAN, LEWIS & BOCKIUS LLP (SF), 2 PALO ALTO SQUARE, PALO ALTO, CA, 94306, US
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 15 Drawing Page(s)
LINE COUNT: 4543
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB In vitro/cell-free process of preparing a sialylated oligosaccharides are described. The sialylated oligosaccharides include gangliosides. The oligosaccharides linked to various moieties including sphingoids and ceramides. Novel compounds that comprise sphingoid groups are disclosed. The compounds include sialylated oligosaccharides including gangliosides as well as various sphingoids and ceramides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 21 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2005:189426 USPATFULL <<LOGINID::20091012>>
TITLE: H. pylori fucosyltransferases
INVENTOR(S): Simala-Grant, Joanne, Edmonton, CANADA
Taylor, Diane, Edmonton, CANADA
Johnson, Karl F., Hatboro, PA, UNITED STATES
Bezila, Daniel James, Philadelphia, PA, UNITED STATES
PATENT ASSIGNEE(S): Neose Technologies, Inc., Horsham, PA, UNITED STATES (non-U.S. corporation)
Governors of the University of Alberta, Edmonton, CANADA (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20050164338	A1	20050728
	US 7326770	B2	20080205
APPLICATION INFO.:	US 2004-764212	A1	20040122 (10)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS: 44

EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 27 Drawing Page(s)
LINE COUNT: 4386
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides nucleic acid and amino acid sequences of fucosyltransferases from Helicobactor pylori. The invention also provides methods to use the fucosyltransferases to synthesize oligosaccharides, glycoproteins, and glycolipids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 22 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2005:38062 USPATFULL <<LOGINID::20091012>>
TITLE: Chemo-enzymatic synthesis of sialylated oligosaccharides
INVENTOR(S): DeFrees, Shawn, North Wales, PA, UNITED STATES
McGuire, Edward J, Furlong, PA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20050032742	A1	20050210
APPLICATION INFO.:	US 2004-485892	A1	20041001 (10)
	WO 2002-US24574		20020801

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-60313278	20010817
	US 2002-60351444	20020123

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MORGAN, LEWIS & BOCKIUS LLP (SF), 2 PALO ALTO SQUARE, PALO ALTO, CA, 94306
NUMBER OF CLAIMS: 31
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 11 Drawing Page(s)
LINE COUNT: 3600
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB In vitro/cell-free process of preparing a sialylated oligosaccharides are described. The sialylated oligosaccharides include gangliosides. The oligosaccharides linked to various moieties including sphingoids and ceramides. Novel compounds that comprise sphingoid groups are disclosed. The compounds include sialylated oligosaccharides including gangliosides as well as various sphingoids and ceramides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 23 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2005:37393 USPATFULL <<LOGINID::20091012>>
TITLE: RNA surveillance among curated proteins
INVENTOR(S): Brenner, Steven E., Berkeley, CA, UNITED STATES
Green, Richard E., Berkeley, CA, UNITED STATES
Hillman, R. Tyler, Berkeley, CA, UNITED STATES
PATENT ASSIGNEE(S): The Regents of the University of California (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20050032071	A1	20050210
APPLICATION INFO.:	US 2003-637482	A1	20030808 (10)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: RICHARD ARON OSMAN, SCIENCE AND TECHNOLOGY LAW GROUP, 242 AVE VISTA DEL OCEANO, SAN CLEMEMTE, CA, 92672
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
LINE COUNT: 932
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Computational methods for systematically characterizing putative protein isoforms as apparent targets of nonsense-mediated decay (NMD) comprise: (a) identifying a dataset of target putative protein isoform sequences

for characterization; (b) identifying from an mRNA dataset corresponding mRNA sequences representing transcripts encoding the protein isoforns; (c) determining corresponding gene intron-exon structures by mapping the MRNA sequences to corresponding genomic sequences; and (d) determining if the transcripts are apparent targets of NMD. Methods for regulating the expression of a gene encoding a protein isoform characterized as an apparent target of NMD comprise biasing expression of the isoform by modulating transcript splicing or modulating NMD activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 24 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2004:300221 USPATFULL <<LOGINID::20091012>>
TITLE: Translational profiling
INVENTOR(S): Chicz, Roman M., Belmont, MA, UNITED STATES
Tomlinson, Andrew J., Wayland, MA, UNITED STATES
Urban, Robert G., Lexington, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20040236091	A1	20041125
APPLICATION INFO.:	US 2004-473127	A1	20040617 (10)
	WO 2002-US9671		20020328

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-60279495	20010328
	US 2001-60292544	20010521
	US 2001-60310801	20010808
	US 2001-60326370	20011001
	US 2001-60336780	20011204
	US 2002-60358985	20020220

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: FISH & RICHARDSON PC, 225 FRANKLIN ST, BOSTON, MA, 02110
NUMBER OF CLAIMS: 42
EXEMPLARY CLAIM: 1
LINE COUNT: 4964
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Polypeptides representative of proteins expressed by a given cell type and isolated nucleic acids that encode the polypeptides are disclosed. The compositions and method described can be used to define a cell type at a given developmental, metabolic, or disease stage by identifying and cataloging proteins expressed in the cell. The compositions can also be used in the manufacture of therapeutics as well as in diagnostics and drug screening.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 25 OF 35 Elsevier Biobase COPYRIGHT 2009 Elsevier Science B.V. on STN
ACCESSION NUMBER: 2004257098 ESBIOBASE <<LOGINID::20091012>>
TITLE: Effect of the Met344His mutation on the conformational dynamics of bovine .beta.-1,4-galactosyltransferase: Crystal structure of the Met344His mutant in complex with chitobiose
AUTHOR(S): Ramakrishnan, Boopathy; Boeggeman, Elizabeth; Qasba, Pradman K.
CORPORATE SOURCE: Ramakrishnan, Boopathy; Boeggeman, Elizabeth; Qasba, Pradman K. (Structural Glycobiology Section, Lab. of Exp. and Compl. Biology, National Cancer Institute, Frederick, MD 21702-1201 (US)); Ramakrishnan, Boopathy; Boeggeman, Elizabeth (Basic Research Program, Center for Cancer Research, National Cancer Institute, Frederick, MD 21702-1201 (US)); Qasba, Pradman K. (Structural Glycobiology Section, LECB, CCR, Frederick, MD 21702 (US))
EMAIL: qasba@helix.nih.gov
SOURCE: Biochemistry (5 Oct 2004) Volume 43, Number 39, pp.

12513-12522, 29 refs.
CODEN: BICHAW ISSN: 0006-2960
DOI: 10.1021/bi049007+
COUNTRY OF PUBLICATION: United States of America
DOCUMENT TYPE: Journal; Article
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 2 Feb 2009
Last updated on STN: 2 Feb 2009
AN 2004257098 ESBIOBASE <<LOGINID::20091012>>
AB .beta.-1,4- ***Galactosyltransferase*** (.beta.4Gal-T1) in the presence of manganese ion transfers galactose from UDP-galactose (UDP-Gal) to N-acetylglucosamine (GlcNAc) that is either free or linked to an oligosaccharide. Crystallographic studies on bovine .beta.4Gal-T1 have shown that the primary ***metal*** ***binding*** site is located in the hinge region of a long flexible loop, which upon Mn 2+ and UDP-Gal ***binding*** changes from an open to a closed conformation. This conformational change creates an oligosaccharide ***binding*** site in the enzyme. Neither UDP nor UDP analogues efficiently induce these conformational changes in the wild-type enzyme, thereby restricting the structural analysis of the acceptor ***binding*** site. The ***binding*** of Mn 2+ involves an uncommon coordination to the S.delta. atom of Met344; when it is mutated to His, the ***mutant*** M344H, in the presence of Mn 2+ and UDP-hexanolamine, readily changes to a closed conformation, facilitating the structural analysis of the enzyme bound with an oligosaccharide acceptor. Although the ***mutant*** M344H loses 98% of its Mn 2+ -dependent activity, it exhibits 25% of its activity in the presence of Mg 2+ . The crystal structures of M344H-Gal-T1 in complex with either UDP-Gal.cntdot.Mn 2+ or UDP-Gal.cntdot. Mg 2+ , determined at 2.3 A resolution, show that the ***mutant*** enzyme in these complexes is in a closed conformation, and the coordination stereochemistry of Mg 2+ is quite similar to that of Mn 2+ . Although either Mn 2+ or Mg 2+ , together with UDP-Gal, binds and changes the conformation of the M344H ***mutant*** to the closed one, it is the Mg 2+ complex that engages efficiently in catalyses. Thus, this property enabled us to crystallize the M344H ***mutant*** for the first time with the acceptor substrate chitobiose in the presence of UDP-hexanolamine and Mn 2+ . The crystal structure determined at 2.3 A resolution reveals that the GlcNAc residue at the nonreducing end of chitobiose makes extensive hydrophobic interactions with the highly conserved Tyr286 residue.

L14 ANSWER 26 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2003:257784 USPATFULL <<LOGINID::20091012>>
TITLE: In vitro modification of glycosylation patterns of recombinant glycopeptides
INVENTOR(S): Bayer, Robert J., San Diego, CA, UNITED STATES
PATENT ASSIGNEE(S): Neose Technologies, Inc., Horsham, PA (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20030180835	A1	20030925
APPLICATION INFO.:	US 2003-391035	A1	20030317 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-855320, filed on 14 May 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-203851P	20000512 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
NUMBER OF CLAIMS: 55
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 2077
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides methods for modifying glycosylation patterns of

glycopeptides, including recombinantly produced glycopeptides. Also provided are glycopeptide compositions in which the glycopeptides have a uniform glycosylation pattern.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 27 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2003:57473 USPATFULL <<LOGINID::20091012>>
TITLE: In vitro modification of glycosylation patterns of recombinant glycopeptides
INVENTOR(S): Bayer, Robert J., San Diego, CA, UNITED STATES
PATENT ASSIGNEE(S): Neose Technologies, Inc., Horsham, PA, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20030040037	A1	20030227
APPLICATION INFO.:	US 2002-219197	A1	20020813 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-855320, filed on 14 May 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	WO 2001-US15693	20010514
	US 2000-203851P	20000512 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
NUMBER OF CLAIMS: 55
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 2071
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides methods for modifying glycosylation patterns of glycopeptides, including recombinantly produced glycopeptides. Also provided are glycopeptide compositions in which the glycopeptides have a uniform glycosylation pattern.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 28 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2003:3494 USPATFULL <<LOGINID::20091012>>
TITLE: Vitro modification of glycosylation patterns of recombinant glycopeptides
INVENTOR(S): Bayer, Robert J., San Diego, CA, UNITED STATES
PATENT ASSIGNEE(S): Neose Technologies, Inc., Horsham, PA, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20030003529	A1	20030102
APPLICATION INFO.:	US 2002-198806	A1	20020719 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 2001-855320, filed on 14 May 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	WO 2001-US15693	20010514
	US 2000-203851P	20000512 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
NUMBER OF CLAIMS: 55
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 2076
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides methods for modifying glycosylation patterns of

glycopeptides, including recombinantly produced glycopeptides. Also provided are glycopeptide compositions in which the glycopeptides have a uniform glycosylation pattern.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 29 OF 35 USPATFULL on STN
ACCESSION NUMBER: 2002:32520 USPATFULL <<LOGINID::20091012>>
TITLE: In vitro modification of glycosylation patterns of recombinant glycopeptides
INVENTOR(S): Bayer, Robert, San Diego, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20020019342	A1	20020214
APPLICATION INFO.:	US 2001-855320	A1	20010514 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-203851P	20000512 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
NUMBER OF CLAIMS: 55
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 2069
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides methods for modifying glycosylation patterns of glycopeptides, including recombinantly produced glycopeptides. Also provided are glycopeptide compositions in which the glycopeptides have a uniform glycosylation pattern.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 30 OF 35 WPIDS COPYRIGHT 2009 THOMSON REUTERS on STN
ACCESSION NUMBER: 2002-583498 [62] WPIDS
DOC. NO. CPI: C2002-164922 [62]
DOC. NO. NON-CPI: N2002-462745 [62]
TITLE: Novel crystal for identifying ligands that modulate glycosyltransferase activity comprises ligand ***binding*** pocket of retaining glycosyltransferase enzyme and optionally donor and/or acceptor molecule
DERWENT CLASS: B04; D16; T01
INVENTOR: DIECKELMANN M; LY H; PERSSON K; STRYNADKA N C J; WAKARCHUK W W; WITHERS S G
PATENT ASSIGNEE: (DIEC-I) DIECKELMANN M; (LYHH-I) LY H; (PERS-I) PERSSON K; (STRY-I) STRYNADKA N C J; (UYBR-N) UNIV BRITISH COLUMBIA; (WAKA-I) WAKARCHUK W W; (WITH-I) WITHERS S G
COUNTRY COUNT: 96

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2002048320	A2	20020620	(200262)*	EN	204	[6]
AU 2002015769	A	20020624	(200267)	EN		
US 20040096951	A1	20040520	(200434)	EN		
AU 2002215769	A8	20051006	(200612)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002048320	A2	WO 2001-CA1793	20011214
US 20040096951	A1	WO 2001-CA1793	20011214
AU 2002015769	A	AU 2002-15769	20011214
US 20040096951	A1	US 2003-450802	20031117
AU 2002215769	A8	AU 2002-215769	20011214

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2002015769 A	Based on	WO 2002048320 A
AU 2002215769 A8	Based on	WO 2002048320 A

PRIORITY APPLN. INFO: US 2000-255636P 20001214
US 2003-450802 20031117

AN 2002-583498 [62] WPIDS

AB WO 2002048320 A2 UPAB: 20050526

NOVELTY - A crystal (I) comprising a ligand ***binding*** pocket of a retaining glycosyltransferase enzyme and optionally a donor molecule or its analog and/or an acceptor molecule or its analog, where (I) comprises the structural coordinates given in the specification, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a model (II) of a ligand ***binding*** pocket of a glycosyltransferase enzyme or of a retaining glycosyltransferase made using (I);

(2) a computer-readable medium (III) storing (I) or (II);

(3) a ligand (IV) capable of ***binding*** to a ligand ***binding*** pocket and/or modulating the function of a retaining glycosyltransferase, identified using (I) or (II);

(4) identifying (M1) a potential modulator of a glycosyltransferase by determining ***binding*** interactions between a test compound and atomic contacts of a model of a ligand ***binding*** pocket of a glycosyltransferase, by generating the atomic contacts on a computer screen, generating test compounds with their spatial structure on the computer screen, determining whether the compounds associate or interact with the atomic contacts defining the glycosyltransferase, and identifying test compounds that are potential modulators by their ability to enter into a selected number of atomic contacts;

(5) a modulator (V) of a glycosyltransferase comprising a donor molecule or an acceptor molecule with the shape and structure of a donor molecule or acceptor molecule in the active site ***binding*** pocket of a reaction catalyzed by a glycosyltransferase;

(6) a pharmaceutical composition (VI) comprising (IV) or (V) and optionally a pharmaceutically acceptable carrier, diluent, excipient or adjuvant or their combinations;

(7) a computer (VII) for producing a model or three-dimensional representation of a molecule or molecular complex, where the molecule or molecular complex comprises a retaining glycosyltransferase or its ligand ***binding*** pocket defined by structural coordinates of a retaining glycosyltransferase amino acids or its ligand ***binding*** pocket, or comprises structural coordinates of atoms of a ligand or a three-dimensional representation of a homolog of the molecule or molecular complex, where the computer comprises a machine-readable data storage medium comprising a data storage material encoded with machine readable data, where the data comprises the structural coordinates of glycosyltransferase amino acids given in the specification or its ligand ***binding*** pocket or ligand, a working memory for storing instructions for processing the machine-readable data, a central-processing unit coupled to the working memory and to the machine-readable data storage medium for processing the machine readable data into the three-dimensional representation, and a display coupled to the central-processing unit for displaying the three-dimensional representation; and

(8) conducting a drug or target discovery business.

ACTIVITY - Antibacterial.

MECHANISM OF ACTION - Modulator of glycosyltransferase (claimed).

No suitable data given.

USE - (I) or (II) is useful for determining the secondary, tertiary and/or quaternary structure of a polypeptide, for screening for a ligand capable of ***binding*** to a ligand ***binding*** pocket and/or modulating the function of a retaining glycosyltransferase, for identifying a potential modulator of a glycosyltransferase function, or for the design of ligand for a retaining glycosyltransferase based on (I) or (II). (IV), (V) or (VI) is useful in the manufacture of a medicament to treat and/or prevent a disease in a mammalian patient (claimed). (I) is

useful for modeling and/or synthesizing mimetics of a ligand ***binding*** pocket, or ligands that associate with the ***binding*** pocket, or to make a model of a glycosyltransferase or its part. (I) or (II) is useful to design, evaluate and identify ligands of a glycosyltransferase or its homolog. (V) is useful for modulating the activity of a glycosyltransferase within a bacterial cell. (IV) or (V) is useful for treating diseases caused by pathogenic organisms such as Neisseria, Haemophilus, Branhamella, Helicobacter and Campylobacter.

L14 ANSWER 31 OF 35 Elsevier Biobase COPYRIGHT 2009 Elsevier Science B.V. on STN
ACCESSION NUMBER: 2002190182 ESBIOBASE <<LOGINID::20091012>>
TITLE: Studies on the metal ***binding*** sites in the catalytic domain of .beta.1,4-galactosyltransferase
AUTHOR(S): Boeggeman, Elizabeth; Qasba, Pradman K.
CORPORATE SOURCE: Boeggeman, Elizabeth; Qasba, Pradman K. (Structural Glycobiology Section, Laboratory of Experimental and Computational Biology, NCI-CCR, Frederick, MD 21702-1201 (US)); Boeggeman, Elizabeth (Intramural Research Support Program-SAIC, Laboratory of Experimental and Computational Biology, NCI-CCR, Frederick, MD 21702-1201 (US))
EMAIL: qasba@helix.nih.gov
SOURCE: Glycobiology (Jul 2002) Volume 12, Number 7, pp. 395-407, 48 refs.
CODEN: GLYCE3 ISSN: 0959-6658
COUNTRY OF PUBLICATION: United Kingdom
DOCUMENT TYPE: Journal; Article
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 1 Feb 2009
Last updated on STN: 1 Feb 2009
AN 2002190182 ESBIOBASE <<LOGINID::20091012>>
AB The catalytic domain of bovine .beta.1,4- ***galactosyltransferase*** (.beta.4Gal-T1) has been shown to have two ***metal*** ***binding*** sites, each with a distinct ***binding*** affinity. Site I binds Mn 2+ with high affinity and does not bind Ca 2+ , whereas site II binds a variety of ***metal*** ions, including Ca 2+ . The catalytic region of .beta.4Gal-T1 has DXD motifs, associated with ***metal*** ***binding*** in glycosyltransferases, in two separate sequences: D 242 YDY-NCFVFSDVD 254 (region I) and W 312 GWGGEDDD 320 (region II). Recently, the crystal structure of .beta.4Gal-T1 bound with UDP, Mn 2+ , and .alpha.-lactalbumin was determined in our laboratory. It shows that in the primary ***metal*** ***binding*** site of .beta.4Gal-T1, the Mn 2+ ion, is coordinated to five ligands, two supplied by the phosphates of the sugar nucleotide and the other three by Asp254, His347, and Met344. The residue Asp254 in the D 252 VD 254 sequence in region I is the only residue that is coordinated to the Mn 2+ ion. Region II forms a loop structure and contains the E 317 DDD 320 sequence in which residues Asp318 and Asp319 are directly involved in GlcNAc ***binding*** . This study, using site-directed mutagenesis, kinetic, and ***binding*** affinity analysis, shows that Asp254 and His347 are strong ***metal*** ligands, whereas Met344, which coordinates less strongly, can be substituted by alanine or glutamine. Specifically, ***substitution*** of Met344 to Gln has a less severe effect on the catalysis driven by Co 2+ . Glu317 and Asp320 mutants, when partially activated by Mn 2+ ***binding*** to the primary site, can be further activated by Co 2+ or inhibited by Ca 2+ , an effect that is the opposite of what is observed with the wild-type enzyme.

L14 ANSWER 32 OF 35 LIFESCI COPYRIGHT 2009 CSA on STN
ACCESSION NUMBER: 2008:97892 LIFESCI <<LOGINID::20091012>>
TITLE: Studies on the metal ***binding*** sites in the catalytic domain of [beta]1,4-galactosyltransferase
AUTHOR: Boeggeman, Elizabeth; Qasba, Pradman K.
SOURCE: Glycobiology, (20020100) vol. 12, no. 7, 395. ISSN: 0959-6658.
DOCUMENT TYPE: Journal
FILE SEGMENT: T

LANGUAGE: English
SUMMARY LANGUAGE: English
AB The catalytic domain of bovine [beta]1,4- ***galactosyltransferase*** ([beta]4Gal-T1) has been shown to have two ***metal*** ***binding*** sites, each with a distinct ***binding*** affinity. Site I binds Mn Face=Superscript 2+ with high affinity and does not bind Ca Face=Superscript 2+ , whereas site II binds a variety of ***metal*** ions, including Ca Face=Superscript 2+ . The catalytic region of [beta]4Gal-T1 has DXD motifs, associated with ***metal*** ***binding*** in glycosyltransferases, in two separate sequences: D Face=Superscript 242 YDYNCFVFSDVD Face=Superscript 254 (region I) and W Face=Superscript 312 GWGGEDDD Face=Superscript 320 (region II). Recently, the crystal structure of [beta]4Gal-T1 bound with UDP, Mn Face=Superscript 2+ , and [alpha]-lactalbumin was determined in our laboratory. It shows that in the primary ***metal*** ***binding*** site of [beta]4Gal-T1, the Mn Face=Superscript 2+ ion, is coordinated to five ligands, two supplied by the phosphates of the sugar nucleotide and the other three by Asp254, His347, and Met344. The residue Asp254 in the D Face=Superscript 252 VD Face=Superscript 254 sequence in region I is the only residue that is coordinated to the Mn Face=Superscript 2+ ion. Region II forms a loop structure and contains the E Face=Superscript 317 DDD Face=Superscript 320 sequence in which residues Asp318 and Asp319 are directly involved in GlcNAc ***binding*** . This study, using site-directed mutagenesis, kinetic, and ***binding*** affinity analysis, shows that Asp254 and His347 are strong ***metal*** ligands, whereas Met344, which coordinates less strongly, can be substituted by alanine or glutamine. Specifically, ***substitution*** of Met344 to Gln has a less severe effect on the catalysis driven by Co Face=Superscript 2+ . Glu317 and Asp320 mutants, when partially activated by Mn Face=Superscript 2+ ***binding*** to the primary site, can be further activated by Co Face=Superscript 2+ or inhibited by Ca Face=Superscript 2+ , an effect that is the opposite of what is observed with the wild-type enzyme.

L14 ANSWER 33 OF 35 BIOTECHNO COPYRIGHT 2009 Elsevier Science B.V. on STN
DUPLICATE
ACCESSION NUMBER: 2001:37385307 BIOTECHNO <<LOGINID::20091012>>
TITLE: Specificity and Mechanism of Metal Ion Activation in UDP-galactose:.beta.
-Galactoside-.alpha.-1,3-galactosyltransferase
AUTHOR: Zhang Y.; Wang P.G.; Brew K.
CORPORATE SOURCE: K. Brew, Dept. of Biomedical Sciences, Florida Atlantic University, 777 Glades Rd., Boca Raton, FL 33431, United States.
E-mail: kbrew@fav.edu
SOURCE: Journal of Biological Chemistry, (13 APR 2001), 276/15 (11567-11574), 48 reference(s)
CODEN: JBCHA3 ISSN: 0021-9258
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 2001:37385307 BIOTECHNO <<LOGINID::20091012>>
AB UDP-galactose:.beta.-galactosyl-.alpha.1,3- ***galactosyltransferase*** (.alpha.3GT) catalyzes the synthesis of galactosyl-.alpha.-1, 3-.beta.-galactosyl structures in mammalian glycoconjugates. In humans the gene for .alpha.3GT is inactivated, and its product, the .alpha.-Gal epitope, is the target of a large fraction of natural antibodies. .alpha.3GT is a member of a family of ***metal*** -dependent-retaining glycosyltransferases that includes the histo blood group A and B enzymes. Mn.sup.2.sup.+ activates the catalytic domain of .alpha.3GT (.alpha.3GTcd), but the affinity reported for this ion is very low relative to physiological levels. Enzyme activity over a wide range of ***metal*** ion concentrations indicates a dependence on Mn.sup.2.sup.+ ***binding*** to two sites. At physiological ***metal*** ion concentrations, Zn.sup.2.sup.+ gives higher levels of activity and may be the natural cofactor. To determine the role of the cation, ***metal*** activation was perturbed by substituting Co .sup.2.sup.+ and Zn.sup.2.sup.+ for Mn.sup.2.sup.+ and by mutagenesis of a conserved D.sup.1.sup.4.sup.9VD.sup.1.sup.5.sup.1 sequence motif that is considered

to act in cation ***binding*** in many glycosyltransferases. The aspartates of this motif were found to be essential for activity, and the kinetic properties of a Val.sup.1.sup.5.sup.0 to Ala ***mutant*** with reduced activity were determined. The results indicate that the cofactor is involved in ***binding*** UDP-galactose and has a crucial influence on catalytic efficiency for galactose transfer and for the low endogenous UDP-galactose hydrolase activity. It may therefore interact with one or more phosphates of UDP-galactose in the Michaelis complex and in the transition state for cleavage of the UDP to galactose bond. The DXD motif conserved in many glycosyltransferases appears to have a key role in ***metal*** -mediated donor substrate ***binding*** and phosphate-sugar bond cleavage.

L14 ANSWER 34 OF 35 CABA COPYRIGHT 2009 CABI on STN
ACCESSION NUMBER: 81:18846 CABA <<LOGINID::20091012>>
DOCUMENT NUMBER: 19800464372
TITLE: Active site of bovine galactosyltransferase: kinetic and fluorescence studies
AUTHOR: O'Keeffe, E. T.; Hill, R. L.; Bell, J. E.
CORPORATE SOURCE: Dep. of Biochem., Univ. of Rochester, Rochester, New York 14642, USA.
SOURCE: Biochemistry, (1980) Vol. 19, No. 22, pp. 4954-4962. 19 ref.
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 1 Nov 1994
Last Updated on STN: 1 Nov 1994
AB The functional properties of the 2 ***metal*** ***binding*** sites of bovine ***galactosyltransferase*** were established using kinetic, spectroscopic and affinity chromatographic approaches. ***Metal*** site I, which is involved in maintaining the structural integrity of the protein, must be liganded prior to the ***binding*** of other substrates and prior to a 2nd ***metal*** ***binding*** to site II, which is shown to be associated with UDPgalactose ***binding*** . Both ***metal*** sites can bind a variety of metals; however, Ca and its fluorescent analogue Eu bind only to site II. Fluorescent resonance energy transfer measurements between Eu in site II and Co in site I indicated a distance of 1.8 plus or minus 0.3 nm between the 2 sites. Chemical ***modification*** studies with S-mercuric-N-dansylcysteine indicated that 1 (of a total of 3) exposed sulphydryl groups can be specifically dansylated and that this sulphydryl group is in or near the UDPgalactose ***binding*** site. Resonance energy transfer measurements between this introduced sulphydryl group and Co in ***metal*** site I give a distance of 1.9 plus or minus 0.3 nm between these points, consistent with the interpretation that the UDPgalactose ***binding*** site, which is associated with ***metal*** site II, is located some distance from the structural ***metal*** site (site I).

L14 ANSWER 35 OF 35 CABA COPYRIGHT 2009 CABI on STN
ACCESSION NUMBER: 76:21102 CABA <<LOGINID::20091012>>
DOCUMENT NUMBER: 19760426565
TITLE: Part I. Sulfonyl fluoride spin labels as active site probes. Part II. Paramagnetic resonance studies of galactosyltransferase and lactose synthetase
AUTHOR: Wong, S. S.
CORPORATE SOURCE: Ohio State Univ., 190 North Oval Drive, Columbus, Ohio 43210, USA.
SOURCE: Dissertation Abstracts International, B, (1975) Vol. 35, No. 11, pp. 5301. Order No: 75-11444.
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 1 Nov 1994
Last Updated on STN: 1 Nov 1994
AB A spin-labelled analogue of UDP-galactose was found to inhibit both ***galactosyltransferase*** and lactose synthetase; dissociation constants were 0.5 and 0.8 mM respectively, the same values as obtained by electron spin resonance spectroscopy. Resonance studies with ***galactosyltransferase*** and (i) Mn revealed at least 2 ***binding*** sites on the enzyme for the ***metal*** ion and (ii)

sulphydryl group ***substitution*** indicated that this group was not situated at the active site but was probably indirectly responsible for the conformational changes.

=> d ibib abs L18 1-4

L18 ANSWER 1 OF 4 WPIDS COPYRIGHT 2009 THOMSON REUTERS on STN
ACCESSION NUMBER: 2009-F27868 [20] WPIDS
TITLE: New polypeptide fragment of alpha 1,3 N-acetylgalactosaminyltransferase (alpha 3GalNAcT) that retains ability to transfer a sugar, useful for diagnosis or treatment of cancer, and proliferative, cardiovascular, or inflammatory diseases
DERWENT CLASS: B04; C03; C06; D16
INVENTOR: ***BOEGGEMAN E*** ; PASEK M; ***QASBA P K*** ; ***RAMAKRISHNAN B***
PATENT ASSIGNEE: (USSH-C) US DEPT HEALTH&HUMAN SERVICES
COUNTRY COUNT: 120

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2009025646	A1	20090226	(200920)*	EN	118[5]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2009025646	A1	WO 2007-US18678	20070822

PRIORITY APPLN. INFO: WO 2007-US18678 20070822
AN 2009-F27868 [20] WPIDS
AB WO 2009025646 A1 UPAB: 20090401
NOVELTY - A polypeptide fragment of an alpha 1,3 N-acetylgalactosaminyltransferase (alpha 3GalNAcT) that retains the ability to transfer a sugar with a chemically reactive functional group from a sugar donor to a sugar acceptor, where the polypeptide fragment comprises SEQ ID NO: 2-20, even numbers only and catalyzes the formation of an oligosaccharide, is new. Sequences not defined here may be found at ftp://ftp.wipo.int/pub/publishedpctsequences/publication.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are:

(1) an isolated nucleic acid molecule comprising a nucleotide sequence which is at least 60% homologous to SEQ ID NO: 1-19, odd numbers, not given in the specification only or their complement;

(2) an isolated nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence at least about 50% homologous to SEQ ID NO: 2-20, even numbers only;

(3) an expression cassette or vector comprising the nucleic acid of (1);

(4) an expression cassette or vector comprising a nucleic acid segment encoding a polypeptide fragment from an alpha 3GalNAcT that transfers a sugar with a chemically reactive functional group from a sugar donor to a sugar acceptor;

(5) a cell comprising the expression cassette or vector of (3) or (4);

(6) a method of making an oligosaccharide;

(7) an oligosaccharide synthesized by the method comprising incubating a reaction mixture comprising a polypeptide fragment of an alpha 3GalNAcT that retains the ability to transfer a sugar with a chemically reactive functional group with a sugar donor and a sugar acceptor;

(8) an oligosaccharide synthesized by the method comprising incubating a reaction mixture comprising a polypeptide fragment of an alpha 3GalNAcT that retains the ability to transfer a sugar with a chemically reactive functional group with a sugar donor and a sugar acceptor, where the polypeptide fragment comprises SEQ ID NO: 2-20, even numbers only;

(9) a composition comprising a polypeptide fragment of an alpha

3GalNAcT that retains the ability to transfer a sugar with a chemically reactive functional group from a sugar donor to a sugar acceptor;

(10) a composition comprising a polypeptide fragment of an alpha3GalNAcT that transfers a sugar with a chemically reactive functional group from a sugar donor to a sugar acceptor, where the polypeptide fragment comprises SEQ ID NO: 2-20, even numbers only;

(11) a composition comprising a polypeptide fragment of an alpha 3GalNAcT that retains that ability to transfer a sugar with a chemically reactive functional group from a sugar donor to a sugar acceptor and catalyzes the formation of an oligosaccharide;

(12) an immunological composition comprising a polypeptide fragment of an alpha 3GalNAcT that retains the ability to transfer a sugar with a chemically reactive functional group from a sugar donor to a sugar acceptor;

(13) an immunological composition comprising a polypeptide fragment of an alpha 3GalNAcT that transfers a sugar with a chemically reactive functional group from a sugar donor to a sugar acceptor, where the polypeptide fragment comprises SEQ ID NO: 2-20, even numbers only, and where one or more antibodies are conjugated to the chemically reactive functional group;

(14) an immunological composition comprising a polypeptide fragment of an alpha 3GalNAcT that retains that ability to transfer a sugar with a chemically reactive functional group from a sugar donor to a sugar acceptor and catalyzes the formation of an oligosaccharide, and where one or more antibodies are conjugated to the chemically reactive functional group;

(15) a method of coupling an agent to a carrier protein;

(16) a method for the diagnosis or treatment of a subject suffering from a disease or disorder;

(17) a method for imaging a target cell or tissue;

(18) a method for synthesizing a detectable galactose (Gal) beta 1-4GlcNAc epitope; and

(19) a kit comprising packaging material and polypeptide fragment from an alpha 3GalNacT above.

ACTIVITY - Cytostatic; Cerebroprotective; Vasotropic; Cardiovascular-Gen; Antiarteriosclerotic; Antianginal; Antiarrhythmic; Immunosuppressive; Antiallergic; Antiasthmatic; Dermatological; Antipsoriatic; Antipruritic; Antiinflammatory; Virucide; Antibacterial; Fungicide; Antilipemic; Immunostimulant. No biological data given.

MECHANISM OF ACTION - Vaccine.

USE - The polypeptide fragment is useful for making an oligosaccharide; coupling an agent to a carrier protein; diagnosis or treatment of a subject suffering from a disease or disorder; imaging a target cell or tissue; and synthesizing a detectable galactose (Gal) beta 1-4GlcNAc epitope, where the disease or disorder is proliferative diseases, cardiovascular diseases, inflammatory diseases, cancer, diseases of ageing, and metabolic diseases or disorders (all claimed). The diseases and/or disorders include but not limited to cancer, both solid tumors as well as blood-borne cancers, such as leukemia; hyperproliferative disorders including neoplasms located in the abdomen, bone, breast, digestive system, liver, pancreas, peritoneum, endocrine glands, eye, head and neck, nervous, lymphatic system, pelvic, skin, spleen, thoracic, and urogenital; cardiovascular disease including but not limited to myocardial infarction, cerebrovascular disease (stroke), transient ischemic attacks, peripheral vascular diseases, arteriosclerosis, angina, high blood pressure, high cholesterol, arrhythmia; genetic diseases, such as deficiency diseases. It is also useful for raising an immune response against infectious agents such as viruses, bacterial, and fungal agents; for treating autoimmune diseases; treating allergic reactions such as asthma; for inhibiting immune responses; and for treating and/or preventing organ rejection or graft versus host disease, atherosclerosis, olitis, regional enteritis, adult respiratory distress syndrome, local manifestations of drug reactions e.g. dermatitis, psoriasis, lichen planus, allergic enteropathies, allergic rhinitis, bronchial asthma, and hypersensitivity or destructive responses to infectious agents.

L18 ANSWER 2 OF 4 WPIDS COPYRIGHT 2009 THOMSON REUTERS on STN
ACCESSION NUMBER: 2009-F27364 [20] WPIDS
TITLE: New polypeptide fragment of a beta (1,4)-galactosyltransferase I that retains the ability to

transfer N-acetylgalactosamine (GalNAc) or galactose,
useful for diagnosing or treating neoplasms,
atherosclerosis, and angina
DERWENT CLASS: B04; C06; D16
INVENTOR: ***BOEGGEMAN E*** ; ***QASBA P K*** ;
RAMAKRISHNAN B
PATENT ASSIGNEE: (USSH-C) US DEPT HEALTH&HUMAN SERVICES
COUNTRY COUNT: 120

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2009025645	A1	20090226	(200920)*	EN	108[7]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2009025645	A1	WO 2007-US18656	20070822

PRIORITY APPLN. INFO: WO 2007-US18656 20070822
AN 2009-F27364 [20] WPIDS
AB WO 2009025645 A1 UPAB: 20090401
NOVELTY - A polypeptide fragment of a beta (1,4)-galactosyltransferase I that retains the ability to transfer N-acetylgalactosamine (GalNAc) or galactose from a sugar donor to a sugar acceptor in the presence of magnesium, where the polypeptide fragment comprises a sequence comprising fully defined 377 amino acids (SEQ ID NO: 2) given in the specification and catalyzes the formation of a GalNAc-beta (1,4)-N-acetylgalactosamine bond in the presence of magnesium, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are:

(1) a nucleic acid molecule comprising fully defined 801 bp (SEQ ID NO: 1) given in the specification;

(2) an isolated amino acid sequence corresponding to the polypeptide fragment above comprising SEQ ID NO: 2;

(3) an expression cassette or vector comprising the nucleic acid of (1);

(4) an expression cassette or vector comprising a nucleic acid segment encoding a polypeptide fragment of a beta (1,4)-galactosyltransferase I that transfers GalNAc or galactose from a sugar donor to a sugar acceptor, where the sugar donor comprises uridine diphosphate (UDP)-GalNAc, UDP-Galactose, UDP-GalNAc analog or a UDP-Galactose analog, in the presence of magnesium or that catalyzes the formation of a GalNAc- or Gal (beta)-1,4-N-acetylgalactosamine bond in the presence of magnesium;

(5) a host cell comprising the expression cassette or vector of (3) or (4);

(6) a method of making a glycoprotein;

(7) an isolated glycoprotein synthesized by the method comprising incubating a reaction mixture comprising a polypeptide fragment from a beta (1,4)-galactosyltransferase I with a sugar donor and a sugar acceptor in the presence of magnesium;

(8) a glycoprotein synthesized by a method comprising incubating a reaction mixture comprising a polypeptide fragment of a beta (1,4)-galactosyltransferase I, where the polypeptide fragment comprises SEQ ID NO: 2, with a sugar donor and an sugar acceptor;

(9) a glycoprotein synthesized by the method comprising incubating a reaction mixture comprising a polypeptide fragment from a beta (1,4)-galactosyltransferase I that catalyzes the formation of a GalNAc-or beta (1,4)-N-acetylgalactosamine bond in the presence of magnesium;

(10) a glycoprotein synthesized by the method comprising incubating a reaction mixture comprising a polypeptide fragment from a beta (1,4)-galactosyltransferase I, where the polypeptide fragment comprises SEQ ID NO: 1, with a sugar donor, where the sugar donor comprises UDP-GalNAc, or a UDP-GalNAc analog, and a N-acetylglucosamine sugar acceptor in the presence of magnesium;

(11) a composition comprising a polypeptide fragment of a beta (1,4)-galactosyltransferase I that transfers GalNAc or galactose from a sugar donor to a sugar acceptor in the presence of magnesium;

(12) a composition comprising a polypeptide fragment from a beta (1,4)-galactosyltransferase I that transfers GalNAc or galactose from a sugar donor to a sugar acceptor, where the polypeptide fragment comprises SEQ ID NO: 2;

(13) a composition comprising a polypeptide fragment of a beta (1,4)-galactosyltransferase I that catalyzes the formation of a GalNAc-beta (1,4)-N-acetylgalactosamine bond in the presence of magnesium;

(14) a method of coupling an agent to a carrier protein;

(15) a method for the diagnosis or treatment of a subject having a disease or disorder;

(16) a method for the diagnosis or treatment of a subject suffering from a disease or disorder;

(17) a method for imaging a target cell or tissue in a subject;

(18) a method for preventing platelet aggregation;

(19) a method for inducing an immune response in a subject; and

(20) a kit comprising packaging material and a polypeptide fragment from the beta (1,4)-galactosyltransferase I above.

ACTIVITY - Cytostatic; Cerebroprotective; Vasotropic; Cardiovascular-Gen; Antiarteriosclerotic; Antianginal; Antiarrhythmic; Immunosuppressive; Antiallergic; Antiasthmatic; Dermatological; Antipsoriatic; Antipruritic; Antiinflammatory; Virucide; Antibacterial; Fungicide; Antilipemic; Immunostimulant. No biological data given.

MECHANISM OF ACTION - Vaccine.

USE - The polypeptide fragment is useful for making a glycoprotein; coupling an agent to a carrier protein; diagnosis or treatment of a subject having or suffering from a disease or disorder; imaging a target cell or tissue in a subject; preventing platelet aggregation; and inducing an immune response in a subject, where the subject is suffering from abnormal platelet aggregation caused by a drug treatment (all claimed). The diseases include but not limited to neoplasms located in the abdomen, bone, breast, digestive system, liver, pancreas, peritoneum, endocrine glands, eye, head and neck, nervous, lymphatic system, pelvic, skin, soft tissue, spleen, thoracic, and urogenital; cardiovascular diseases (stroke); transient ischemic attacks (TIA); peripheral vascular diseases; atherosclerosis; angina; high blood pressure; high cholesterol; arrhythmia; genetic diseases e.g. enzyme deficiency disease; hyperproliferative disorders; autoimmune diseases; allergic reactions e.g. asthma or other respiratory problems; anaphylaxis, hypersensitivity to an antigenic molecule; organ rejection; graft versus host disease; olitis; regional enteritis; adult respiratory distress syndrome; local manifestations of drug reactions e.g. dermatitis; atopic dermatitis and infantile eczema; contact dermatitis; psoriasis; lichen planus; allergic enteropathies; allergic rhinitis; bronchial asthma; and rheumatic fever. It is also useful for raising immune response against infectious agents e.g. viruses and bacterial or fungal agents.

L18 ANSWER 3 OF 4 WPIDS COPYRIGHT 2009 THOMSON REUTERS on STN
ACCESSION NUMBER: 2005-417869 [42] WPIDS
DOC. NO. CPI: C2005-128143 [42]
TITLE: Targeted glycoconjugate useful for treatment of cancer, inflammatory disease, hormone deficiency disease, and infectious disease comprises bioactive agent and targeting compound joined by modified saccharide compound
DERWENT CLASS: B03; B04; D16
INVENTOR: ***QASBA P*** ; ***RAMAKRISHNAN B***
PATENT ASSIGNEE: (USSH-C) US DEPT OF HEALTH; (USSH-C) US DEPT HEALTH & HUMAN SERVICES
COUNTRY COUNT: 106

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2005051429	A2	20050609	(200542)*	EN	63	[1]
US 20070258986	A1	20071108	(200777)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

WO 2005051429 A2 WO 2004-US38781 20041118
US 20070258986 A1 Provisional US 2003-523112P 20031119
US 20070258986 A1 WO 2004-US38781 20041118
US 20070258986 A1 US 2007-580108 20070213

PRIORITY APPLN. INFO: US 2003-523112P 20031119
US 2007-580108 20070213
AN 2005-417869 [42] WPIDS
AB WO 2005051429 A2 UPAB: 20051222
NOVELTY - A targeted glycoconjugate (A1) comprising bioactive agent and targeting compound joined by a modified saccharide compound, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:
(1) syntheses of (A1) involves: either incubating a reaction mixture comprising a beta(1,4)- ***galactosyltransferase*** I or its ***mutant*** with a targeting compound and a donor molecule comprising a ***modified*** saccharide residue to form a targeting- ***modified*** saccharide compound (b1); and incubating (b1) and a bioactive agent to generate a covalent bond between the ***modified*** saccharide and the bioactive agent; or incubating a reaction mixture of a donor molecule comprising a ***modified*** saccharide residue and the bioactive active agent to generate a covalent bond between the ***modified*** saccharide and the bioactive agent; and incubating a reaction mixture comprising a P(1,4)- ***galactosyltransferase*** I or its ***mutant*** with the ***modified*** saccharidebioactive agent compound formed with a targeting compound to form the glyconjugate; and
(2) a kit comprises (A1) or the pharmaceutical composition of (A1) and instructions for use in a therapeutic or diagnostic method.
ACTIVITY - Cytostatic; Antiinflammatory; Antimicrobial; Antibacterial; Virucide; Fungicide; Antiparasitic; Cardiovascular-Gen.; Immunosuppressive; Antiallergic; Antileprotic; Antitubercular; Tuberculostatic; Cardiant; Cerebroprotective; Vasotropic; Antiarteriosclerotic; Antianginal; Antilipemic; Antiarrhythmic; Antiarthritic; Antirheumatic; Dermatological; Nephrotropic; Antithyroid; Neuroprotective; Muscular-Gen.; Ophthalmological; Uropathic; Antithyroid; CNS-Gen.; Antidiabetic; Antipsoriatic; Antiasthmatic; Hepatotropic; Endocrine-Gen.; Antianemic; Immunosuppressive; Thyromimetic; Antiulcer; Gastrointestinal-Gen.; Antianginal; Ophthalmological; Anti-HIV.
MECHANISM OF ACTION - Vaccine.
USE - For delivering at least one bioactive agent, vaccinating mammal (e.g. human) against disease and In the preparation of medicament for the treatment or detection of disease or disorder e.g. cancer, inflammatory disease or disorder, hyperproliferative disorder, hormone deficiency disease, hormone abnormality due to hypersecretion, infectious disease, bacterial infection, viral infection, fungal infection, parasitic infection, cardiovascular disease or disorders, genetic disease, autoimmune disease, allergic reaction or conditions, organ rejection or graft-versus-host disease and immune deficiency disease (claimed). Also use for treating e.g. leprosy, tuberculosis, myocardial infarction, cerebrovascular diseases, stroke, peripheral vascular diseases, arteriosclerosis, angina, high blood pressure, high cholesterol, arrhythmia, rheumatoid arthritis, dermatitis, glomerulonephritis, Grave's disease, multiple sclerosis, myasthenia gravis, neuritis, Reiter's disease, autoimmune thyroiditis, systemic lupus erythematosus, Guillain-Barre Syndrome, insulin dependent diabetes mellitis, autoimmune inflammatory eye disease, autoimmune hemolysis, psoriasis, autoimmune asthma, chronic hepatitis, hypogonadism, pernicious anemia, alopecia areata, infertility due to antispermatazoan antibodies, hearing loss, Hashimoto's disease, hypoparathyroidism, ulcerative colitis, asthma, eye infections and AIDS.
ADVANTAGE - The glycoconjugate improves delivery systems for bioactive agents, which is capable of preferentially targeting therapeutically-relevant cells or tissues.

L18 ANSWER 4 OF 4 WPIDS COPYRIGHT 2009 THOMSON REUTERS on STN
ACCESSION NUMBER: 2004-571443 [55] WPIDS
DOC. NO. CPI: C2004-208613 [55]
TITLE: New catalytic domains of beta (1,4)-galactosyltransferase I with altered donor and acceptor specificities, useful for synthesizing oligosaccharides for therapeutic purposes, or for increasing the immunogenicity of an

antigen
DERWENT CLASS: B04; D16
INVENTOR: ***QASBA P*** ; ***RAMAKRISHNAN B***
PATENT ASSIGNEE: (USSH-C) US DEPT HEALTH & HUMAN SERVICES; (USSH-C) US DEPT HEALTH&HUMAN SERVICES; (USSH-C) US DEPT OF HEALTH&HUMAN SERVICES; (USSH-C) US NAT INST OF HEALTH; (QASB-I) QASBA P; (RAMA-I) RAMAKRISHNAN B; (USSH-C) US SEC HEALTH&HUMAN SERVICES
COUNTRY COUNT: 107

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2004063344	A2	20040729	(200455)*	EN	92[9]	
AU 2004204463	A1	20040729	(200561)	EN		
EP 1587919	A2	20051026	(200570)	EN		
US 20060084162	A1	20060420	(200627)	EN		
JP 2006518192	W	20060810	(200654)	JA	62	
US 7482133	B2	20090127	(200914)	EN		
AU 2004204463	B2	20090212	(200955)	EN		
AU 2009201883	A1	20090604	(200956)#	EN		
US 20090233345	A1	20090917	(200961)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2004063344	A2	WO 2004-US470	20040109
US 20060084162	A1 Provisional	US 2003-439298P	20030110
US 7482133	B2 Provisional	US 2003-439298P	20030110
US 20060084162	A1 Provisional	US 2003-450250P	20030225
US 7482133	B2 Provisional	US 2003-450250P	20030225
AU 2004204463	A1	AU 2004-204463	20040109
AU 2004204463	B2	AU 2004-204463	20040109
AU 2009201883	A1 Div Ex	AU 2004-204463	20040109
EP 1587919	A2	EP 2004-701172	20040109
EP 1587919	A2	WO 2004-US470	20040109
US 20060084162	A1 Cont of	WO 2004-US470	20040109
JP 2006518192	W	WO 2004-US470	20040109
US 7482133	B2 Cont of	WO 2004-US470	20040109
US 20060084162	A1	US 2005-178230	20050708
US 7482133	B2	US 2005-178230	20050708
JP 2006518192	W	JP 2006-500866	20040109
AU 2009201883	A1	AU 2009-201883	20090512
US 20090233345	A1 Provisional	US 2003-439298P	20030110
US 20090233345	A1 Provisional	US 2003-450250P	20030225
US 20090233345	A1 Cont of	WO 2004-US470	20040109
US 20090233345	A1 Div Ex	US 2005-178230	20050708
US 20090233345	A1	US 2009-321006	20090113

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2004204463	A1 Based on	WO 2004063344 A
EP 1587919	A2 Based on	WO 2004063344 A
JP 2006518192	W Based on	WO 2004063344 A
AU 2004204463	B2 Based on	WO 2004063344 A
US 20090233345	A1 Div Ex	US 7482133 B

PRIORITY APPLN. INFO: US 2003-450250P 20030225
US 2003-439298P 20030110
WO 2004-US470 20040109
US 2005-178230 20050708
AU 2009-201883 20090512
US 2009-321006 20090113
AN 2004-571443 [55] WPIDS
AB WO 2004063344 A2 UPAB: 20090307
NOVELTY - A purified and isolated catalytic domain from a

beta(1,4)-galactosyltransferase I, is new.

DETAILED DESCRIPTION - The catalytic domain catalyzes the formation of:

(a) a glucose-beta(1,4)-N-acetylglucosamine bond at a greater rate than wild-type beta(1,4)-galactosyltransferase I;

(b) an N-acetylgalactosamine-beta(1,4)-N-acetylglucosamine bond;

(c) an N-acetylgalactosamine-beta(1,4)-glucose bond in the presence of alpha-lactalbumin;

(d) an N-acetylglucosamine-beta(1,4)-N-acetylglucosamine bond;

(e) a mannose-beta(1,4)-N-acetylglucosamine bond; or

(f) a galactose-beta(1,4)-N-acetylglucosamine-6-SO3 bond.

INDEPENDENT CLAIMS are also included for the following:

(1) a polypeptide comprising the above catalytic domain;

(2) a nucleic acid segment encoding the above polypeptide;

(3) an expression cassette comprising the nucleic acid segment cited above;

(4) a cell comprising the above nucleic acid segment or expression cassette;

(5) synthesizing a glucose-beta(1 ,4)-N-acetylglucosamine moiety, an N-acetylgalactosamine-beta(1,4)-N-acetylglucosamine moiety, an N-acetylgalactosamine-beta(1,4)-glucose moiety, an N-acetylglucosamine-beta(1,4)-N-acetylglucosamine moiety, a mannose-beta(1,4)-N-acetylglucosamine moiety, or a galactose-beta(1,4)-N-acetylglucosamine-6-SO3 moiety;

(6) an oligosaccharide comprising a glucose-beta(1 ,4)-N-acetylglucosamine moiety, an N-acetylgalactosamine-beta(1,4)-N-acetylglucosamine moiety, an N-acetylgalactosamine-beta(1,4)-glucose moiety, an N-acetylglucosamine-beta(1,4)-N-acetylglucosamine moiety, a mannose-beta(1,4)-N-acetylglucosamine moiety, or a galactose-beta(1,4)-N-acetylglucosamine-6-SO3 moiety synthesized by the above method;

(7) a method comprising incubating a reaction mixture comprising an antigen having an acceptor, a donor, and the beta(1,4)-galactosyltransferase I cited above under conditions where the beta(1,4)-galactosyltransferase I catalyzes bond formation between the donor and the acceptor on the antigen and causes an increase in the immunogenicity of the antigen;

(8) an antigen prepared by the method in (7);

(9) preparing a saccharide composition having a defined sequence;

(10) a composition prepared by the method in (9); and

(11) a kit comprising a packaging material and a polypeptide comprising the catalytic domain cited above.

ACTIVITY - Virucide. No biological data given.

MECHANISM OF ACTION - Vaccine.

USE - The composition and methods are useful for synthesizing large amounts of oligosaccharides for therapeutic purposes, or for increasing the immunogenicity of an antigen or a (viral) vaccine.

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(FILE 'HOME' ENTERED AT 11:16:32 ON 12 OCT 2009)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 11:17:03 ON 12 OCT 2009

SEA GALACTOSYLTRANSFERASE

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9 FILE ADISCTI

4 FILE ADISINSIGHT

1 FILE ADISNEWS

280 FILE AGRICOLA

31 FILE ANABSTR

1 FILE ANTE

19 FILE AQUASCI

200 FILE BIOENG

3465 FILE BIOSIS

371 FILE BIOTECHABS

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          371  FILE BIOTECHDS
         1154  FILE BIOTECHNO
          556  FILE CABA
         4357  FILE CAPLUS
           39  FILE CEABA-VTB
            8  FILE CIN
          113  FILE CONFSCI
            3  FILE CROPU
           56  FILE DDFB
           71  FILE DDFU
         2632  FILE DGENE
          145  FILE DISSABS
           56  FILE DRUGB
           90  FILE DRUGU
            9  FILE EMBAL
         2865  FILE EMBASE
         1133  FILE ESBIOBASE
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           56  FILE FSTA
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         1133  FILE PASCAL
           27  FILE PCTGEN
            6  FILE PHAR
            3  FILE PHIN
           22  FILE PROMT
            1  FILE PROUSDDR
         3027  FILE SCISEARCH
         1173  FILE TOXCENTER
         3371  FILE USGENE
         1676  FILE USPATFULL
          356  FILE USPAT2
            2  FILE VETB
            3  FILE VETU
          264  FILE WPIDS
          264  FILE WPINDEX
            1  FILE IPA
            2  FILE NAPRALERT
           23  FILE NLDB
L1            QUE GALACTOSYLTRANSFERASE
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L2        25231 S L1
L3         2181 S (MUTANT OR MUTATTION OR MODIF? OR SUBSTITUTION) (S) L2
L4         2445 S (MUTANT OR MUTATION OR MODIF? OR SUBSTITUTION) (S) L2
L5           46 S METAL (S) L4
L6          287 S METAL AND L4
L7          269 S BINDING AND L6
L8          229 S ION AND L7
L9          117 S MAGNESIUM AND L8
L10           1 S (M344 OR C342 OR R228 OR A229) AND L9
L11          40 S BINDING AND L5
L12           1 S (M344 OR C342 OR R228 OR A229) AND L11
L13           1 S (M344 OR C342 OR R228 OR A229) AND L3
L14          35 DUP REM L11 (5 DUPLICATES REMOVED)
L15         665 S (QASBA OR BOEGGEMAN OR RAMAKRISHNAN)/AU
L16           0 S L15 AND L14
L17           4 S L15 AND L4
L18           4 DUP REM L17 (0 DUPLICATES REMOVED)

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COST IN U.S. DOLLARS	ENTRY	SINCE FILE SESSION	TOTAL
FULL ESTIMATED COST		195.79	198.05

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	ENTRY	SINCE FILE SESSION	TOTAL
CA SUBSCRIBER PRICE		-0.82	-0.82

STN INTERNATIONAL LOGOFF AT 11:25:53 ON 12 OCT 2009